the manufacture of chemicals by the contact process in dentistry and in jewellery."

Mr. Read was ordered abroad for active service while the volume was being set up. Had he seen all proofs, no doubt imperfections, of which the foregoing are random examples, would have been eliminated.

The book is a useful epitome of mineralogical principles and methods, and a convenient small work of reference to the more important rock-forming and economic minerals. C. G. C.

British Sea Fish: An Illustrated Handbook of the Edible Sea Fishes of the British Isles. By Harold Swithinbank and G. E. Bullen. Pp. xi + 35. (London: Simpkin, Marshall, Hamilton, Kent and Co., Ltd.) Price 2*s.* net.

This is a pamphlet of which six pages are devoted to an account of the British sea fisheries, and thirty-five pages to descriptions of some thirty-four species of marketable fishes. The illustrations are very small half-tone reproductions of mediocre photographs. The descriptions consist each of about six to ten lines of print summarising the characters of the species; two or three lines of print giving the range of occurrence; and of "remarks" dealing mainly with the quality, flavour, and methods of cooking of the fishes considered. We learn from the preface that the work "is to be regarded as in no way scientific," and that it is intended to popularise the cheaper and coarser kinds of sea-fish which at present suffer from prejudice. Considering these limitations and the relatively high price of the pamphlet, we find it difficult to think of the particular public to which it is intended to appeal at the present time; for it is far too small to be of much use to anyone really interested in marine biology, and too expensive to be used in a propaganda.

J. J.

LETTERS TO THE EDITOR.

[*The Editor does not hold himself responsible for opinions expressed by his correspondents. Neither can he undertake to return, or to correspond with the writers of, rejected manuscripts intended for this or any other part of* Nature. *No notice is taken of anonymous communications.*]

"Summer Time" and Meteorology.

Recently I have had occasionally to rise at 3 a.m. and to be out between 3 a.m. and 5 a.m. I found the weather misty and relatively very cold, with temperature about 45° F. Later in the day temperature rose to 75° F. Clothing suitable for the early morning was quite unsuitable for the day, and (what I specially noticed) *vice versâ*; it occurred to me that civilised people had unconsciously adopted a day which centred a little later than the time of maximum temperature, thereby securing the nearest possible approach to a uniform temperature in the daily period of their "away from home" existence. In this way they save themselves unnecessary trouble in putting on and taking off clothing; and, further, they save themselves unnecessary risk of chills and colds. The change from a temperature of 45° F. to one of 75° F. is equivalent to changing from a cool day of January to a warm day of July. The change may stimulate and energise the labourer in the fields; I doubt if its effect on the worker in a city office is good or pleasant.

The average increase of temperature from 8 a.m. to 9 a.m. in the summer months is nearly 40 per cent. of the increase from 9 a.m. to the maximum about 2 p.m.; and the decrease in humidity (or dampness of the air) from 8 a.m. to 9 a.m. is nearly 50 per cent. of the decrease from 9 a.m. to the minimum humidity in the afternoon (and the rate of change from 7 a.m. to 8 a.m. is equally fast).

Moving the hands of the clock will neither warm nor dry the air. People are therefore being plunged into cooler, damper air through their ignorance (1) of the fact that custom is usually based on the teachings of experience; (2) of the facts of observation which indicate directly what has been the indirect teaching of experience in this case.

The argument that it is as cold in April at 9 a.m. as it is in May at 8 a.m. is ineffective, because people in England adapt the amount and character of their clothing to the season of the year, and what they feel most is not absolute cold, but relative cold; and *relatively to the middle of the day* it is twice as cold at 8 a.m. in May as at 9 a.m. in January.

There is an element of romance about early rising if the experiment is not too often repeated. Perhaps one summer will suffice. E. Gold.

In accordance with the provisions of the Summer Time Act, Greenwich Mean Time will continue to be used for all meteorological observations and publications, so that no discontinuity will be caused during the period when Summer Time is in force. But besides the observations which are made by regular observers, many meteorological phenomena of various kinds are from time to time recorded or reported, and it is highly desirable that there should be no ambiguity in these reports, which are often of much interest and importance. The council of the Royal Meteorological Society desires to direct attention to the necessity of stating precisely the time of occurrence in all such cases, and whether the times quoted refer to Greenwich Mean Time or to Summer Time, since the omission of this information may render the record of the phenomenon useless for meteorological purposes.

Such occasional observations form a valuable addition to those which are made at the permanent observing stations and supplement them usefully; it is therefore essential that they should be recorded with precision. H. G. Lyons,
President

Royal Meteorological Society, May 19.

Geologists and Special Constables.

A recent experience of Canon E. Hill and myself may be useful to geologists. On May 3 we went by train from Lincoln to East Barkwith Station, on the line to Louth, and walked by a rather roundabout route to South Willingham Station, looking at the structure of the country and for sections of drift. While waiting for our train outside the latter station, a man, in dress and aspect rather above a farm labourer, accompanied by another with a badge of some sort on his coat, came up to us, and in none too civil a tone began to catechise us as to what we were doing, where we were and had been staying, our homes, professions, ages, heights, and the like, about which we gave him full information. Apparently he did not know that there was such a science as geology, but after he had received a large amount of biographical information he acknowledged it by saying, in the tone of one rebuking two peccant villagers, that as

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educated men we ought to have known we had no business to be going about the country. This was rather too strong, so I retorted, "That is nonsense; we have a right to take a walk along the roads to see the country." To cut a long story short, he departed, before our train arrived, with the remark that, if we had been photographing or sketching, he should have taken us into custody.

We were at nearest about seventeen miles from the sea. Neither at Louth (where we had spent a week) nor at Lincoln was any notice posted up in the hotel (or elsewhere, so far as we had seen) supporting his view, and we had not left the high road, except to enter two pits. It is therefore obvious that any village Dogberry may employ the "brief authority" with which he imagines himself clad to prevent all study of English geology or natural history.

T. G. Bonney.

National Food Supply and Nutritional Value.

One of the remarks made in the article in Nature of May 11 on my survey of the "Food Value of Great Britain's Food Supply" is certainly justified, namely, "the value for protein seems low." It is too low. This has arisen from taking an analysis for wheat flour in which the protein was 7·9 per cent., whereas it should be, more correctly, something like 10·7 per cent. Making an allowance for this difference increases the daily protein ration per man by 10·4 grams and brings it to 112·1 grams instead of 101·7. For a similar reason the carbohydrate should be reduced from 587·12 grams per man per day to 580·7 grams. Whether the fat should be reduced depends on the analysis adopted for the different kinds of meat. A recalculation, however, adopting different analyses, and perhaps, on the whole, more accurate ones, makes no material difference in the daily ration "as purchased." It certainly affords no ground for reduction; on the contrary, it shows an increase of 1·9 grams per man per day.

In conclusion, perhaps I may be permitted to express my grateful appreciation of the very fair and sympathetic way in which your article, as a whole, is written and for the opportunity it affords of making these corrections, which I hope to publish later in detail.

W. H. Thompson.

Trinity College, Dublin, May 15.

I am glad to find that Prof. Thompson has discovered a reason for giving us a more reassuring figure concerning the national supply of protein. It is now clear that we have a larger margin upon which to draw in case retrenchment should prove necessary.

Readers of Nature should be grateful to Prof. Thompson for making the correction, and I have myself to thank him for the courtesy of his letter.

The Writer of the Article.

May 19.

The Lower Greensand Flora.

In the kind review of my work on the Lower Greensand Flora in Nature of May 4 your reviewer states that I have overlooked a memoir by Buckland. This is the Bridgewater treatise. May I point out (1) that I was dealing with Lower Greensand and not Portland Oolite plants, and therefore not professing to give a complete account of the latter, but merely referred to Buckland's *original* memoir, in which the name of the genus was founded, for purposes of nomenclature; (2) that, even though in the later work (the Bridgewater treatise) Buckland figures a specimen with the "lateral buds," which are probably cones, it remains the fact, as I stated, that no cones are figured in the original *type*; (3) that the Bridgewater treatise example can only be accepted as being the same species as the original type by an assumption that they were, in fact, identical, because, as I stated, the original type specimen is lost; (4) that, consequently, it is not carelessness, but a perhaps over-meticulous scrupulousness in nomenclature which made me, and still makes me, hesitate to accept as a certainty the identity of the so-called *Cycadites microphyllus* of the Bridgewater treatise with the lost original vegetative type of *Cycadeoidea microphyllus,* in spite of the top part of the drawing.

Marie C. Stopes.

Overlooking a reference is at least to some of us too common an occurrence to need an elaborate defence. My point is that Buckland's later description of one of his species, *Cycadeoidea microphylla,* is fatal to an important argument used by Dr. Stopes. Buckland expressed no doubt as to the specific identity of the specimen figured in the Bridgewater treatise with that on which the original account was based, and, whether or not the stems belong to the same species, there are no adequate grounds for doubting their generic identity. The natural course to pursue in endeavouring to solve a problem is to consider such evidence as is available, and, as regards the question at issue, I maintain that the evidence overlooked by Dr. Stopes furnishes a serious—in my opinion a fatal —objection to her conclusions.

A. C. S.

Meteorological Conditions of a Blizzard.

The word "blizzard," signifying originally a type of snowstorm most common and most severe in the Rocky Mountain States of the Union, although occasionally occurring elsewhere, is now loosely used to mean any heavy snowstorm. This is unfortunate, for a term is needed for the type of storm referred to above. Three things must co-exist in a blizzard—large quantities of very fine snow; very low temperature, generally below zero Fahrenheit; and a high wind of great velocity.

Apparently the loose use of the word is becoming common in Great Britain, for you refer in Nature of April 6 (p. 129) to "a blizzard of unusual severity." The context shows that neither the snow nor the temperature condition could have been fulfilled, for you say that the gale "was accompanied by *rain* and snow."

I doubt very much whether the British Isles could produce the requisite conditions for a real blizzard.

Arthur E. Bostwick.

St. Louis, Mo., April 24.

THE ROUTLEDGE EXPEDITION TO EASTER ISLAND.

Now that members of Mr. Scoresby Routledge's expedition to Easter Island have returned to this country, it is possible to give some idea in broad outline of the objects of the expedition and of its chief results. The expedition, which was aided by grants from the British Association and the Royal Society, was exceptionally well equipped. It also had the advantage of being independent of the infrequent opportunities of communication with Easter Island, as Mr. Routledge had built and fitted at his own expense the schooner *Mana,* of 126 tons, with auxiliary motor power, in which the expedition sailed from

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